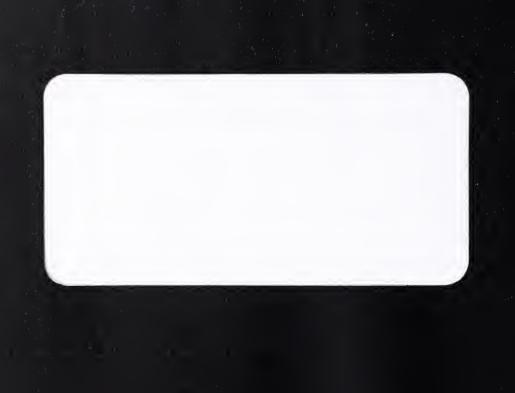
Digital Services Lines-of-Business Worldwide Markets





Digital Services Lines-of-Business Worldwide Markets

Prepared for DEC

May 21, 1992





Published by INPUT 1280 Villa Street Mountain View, CA 94041-1194 U.S.A.

Digital Services Lines-of-Business

Worldwide Markets

Printed in the United States of America.

The information provided in this report shall be used only by the employees of and within the current corporate structure of INPUT's clients, and will not be disclosed to any other organization or person including parent, subsidiary, or affiliated organization without prior written consent of INPUT.

INPUT exercises its best efforts in preparation of the information provided in this report and believes the information contained herein to be accurate. However, INPUT shall have no liability for any loss or expense that may result from incompleteness or inaccuracy of the information provided.



Table of Contents

- I Introduction
- II Digital Services Lines-of-Business Definitions
- A Introduction
- B Hardware Product Services (HPS)
- C Software Product Services (SPS)
- D Desktop Services (DTS)
- E Operations Support Services (OSS)
- F Applications Project Services (APS)
- G Network Integration Services (NIS)
- H Digital Consulting Services (DCS)
- I Customer Training (CT)
- J Non-Applicable INPUT Market Segments
- III Market Forecast Translation
- A Introduction
- B United States
- C Western Europe
- D Japan
- E Other Areas
- F Worldwide

Appendix

A Market Forecast Spreadsheets



Exhibits

I	-1	INPUT to Digital Definitions Translation
III	-1	Software Products - US
		Allocation by Sub-mode, 1992 & 1996
	-2	Software Products - Europe
		Allocation by Sub-mode, 1992 & 1996
	-3	Software Development Allocation - Europe
		Skills Based versus Project Based
	-4	Customer Services Market - Europe, Professional Services
	-5	Software Products - Japan
		Allocation by Sub-mode, 1992 & 1996
	-6	Proportion of Worldwide Market Represented by Total of
		US, Western Europe and Japan, by Delivery Mode
		- 1992 & 1996



I Introduction

This study was prepared to provide Digital Services group with an estimate of the size of its lines-of-business markets based on INPUT forecasts. The effort was commissioned by Bruce Dishman, Manager Strategic Planning for Digital Services.

To accomplish this study INPUT first developed a translation table between INPUT's standard information services industry market segment definitions and Digital Services lines-of-business definitions. This is presented in Chapter II of this report.

Then INPUT used these definitions, its 1991-1996 Worldwide Information Services Forecast and additional research material where required to translate the INPUT forecasts into the Digital Services lines-of-business markets. This is presented in Chapter III of this report.

- · The market forecast translation was done for:
 - United States
 - Western Europe
 - Japan
 - Other Areas (rest of the world market)
 - Worldwide market in total
- Each market translation is presented in a detailed spreadsheet for 1992 and 1996 with a cross tabulation between the Digital Services lines-of-business and INPUT's delivery modes and submodes.
- The market size tables have been provided on disk as well as in printed form.



The documentation provided in this report creates the basis for INPUT to do this translation in future years and to adjust definitions and assumptions as they are changed either by Digital Services group or INPUT.



II Digital Services Lines-of-Business - Definitions

Δ

Introduction

This document provides the definitions for translating INPUT standard information services industry definitions into Digital Services Lines-of Business. The definition translation is intended to permit INPUT to assist Digital in determining market sizes for the various Digital Services lines-of-business using published INPUT market forecasts.

The initial translation has been prepared based on the 1991 INPUT Definition of Terms which is included as Appendix A. Reference is also made to the 1992 INPUT Definition of Terms which includes additional market segmentation that will facilitate the market forecast translation in future years. See Appendix B

The forecasts to be used in this translation and market size determination are the INPUT 1991-1996 Worldwide Information Services Forecast. Where required INPUT has provided its estimation of additional segment (lines-of-business) where a direct translation between INPUT market segments and Digital Services lines-of-business is not possible.

Throughout this document INPUT has used the following terms to describe market segments according to INPUT definitions.

YWWMF



- Delivery Mode a major segment of the information services industry. Delivery modes are specific products or services that satisfy a given user need. During 1991 INPUT used eight delivery modes to define the information services industry. For 1992 INPUT has added a ninth delivery mode, Equipment Services. They are listed in Exhibit II-1 and defined in Appendix A and B.
- . Submodes each delivery mode is broken down into submodes or components that provide a further delineation of the product or services category. Submodes are listed in Exhibit II-1 where they are relevant to the translation to Digital Services lines-of-business. See appendix A & B for a complete listing and definitions.
- · Hardware or equipment INPUT uses the term equipment for computer and communications equipment. Digital uses the term hardware. They are used interchangeably in this study.

Exhibit II-1 provides the framework for the translation of INPUT definitions into Digital Services lines-of-business. Each market segment (intersection between INPUT and Digital definitions which is relevant to the translation is coded by a number. The translations are explained below under the Digital Services lines-of-business headings.

EXHIBIT II-1

Digital Services Lines-of-Business

see attached

p

Hardware Product Services (HPS)

Digital defines HPS as: deliver hardware installation, remedial services and support on all Digital and multi-vendor products and systems through on-site and off-site services.

- Digital includes the entire value of a maintenance contract including repair or replacement component costs.
- Digital includes the value of spare parts sold to customers performing self maintenance.



INPUT has forecasted the customer services market for a number of years. Customer services is defined as the provision of on-site hardware maintenance services by computer manufacturers and third party firms.

- INPUT does not include the cost of spare parts or components used in the services process, but does include the total value of services contracts.
- In 1992 INPUT has renamed this market segment as Equipment Services and included it as the ninth delivery mode within the information services industry.
- · See segment marked 1A in Exhibit II-1.

\mathbf{C}

Software Product Services (SPS)

Digital defines SPS as: provide the technical and business expertise required for the replication, distribution, and support services for customer software environment worldwide.

· Support services includes contracted telephone support, annual maintenance fees and upgrade fees.

INPUT has no directly comparable market segment. INPUT includes traditional software maintenance and upgrade services provided to purchasers of software products within its applications and systems software products delivery modes and within the software products submodes of the turnkey systems and systems integration delivery modes.

For this study INPUT has provided a breakout of each software products delivery mode or submode between new product purchases and maintenance/support. See segments marked "2A to 2 J" in Exhibit II-1.

- · The maintenance/support market has been included in SPS.
- The new product purchases market is not included within the Digital Services lines-of-business and is not applicable to this study with one exception Customer Training (CT). See section I.

D

Desktop Services (DTS)

Digital defines DTS as: deliver a broad portfolio of services for multivendor desktop hardware, PC LANs plus standard third party applications. Categories of services include: start up services, direct access advisory services, maintenance services and integration services.

INPUT has no corresponding market segment in its 1991 or prior definitions and no market size information is provided as part of this study.

For 1992 INPUT has defined a new submode called Desktop Operations as part of the Systems Operations delivery mode. This definition generally corresponds to the Digital definition and will permit INPUT to provide Digital with market size information from the 1992-1997 INPUT forecast. See segment marked 3A in Exhibit II-1.

E

Operations Support Services (OSS)

Digital defines OSS as: provide customized solutions to customers in the operations of their information technology solutions. Included are all of the professional services typically related to hardware services such as installation and recovery planning, operations consulting, facilities planning. Also provides data center operations management services.

INPUT's primary corresponding market segment is the Systems Operations delivery mode. For 1991 Systems Operations has two submodes.



- Platform Systems Operations where the vendor manages and operates computer systems, often including telecommunications networks and can be directly translated into OSS. See segment marked 4A in Exhibit II-1.
- Applications Systems Operations where the vendor provides platform systems operations services and is also responsible for maintaining, or developing and maintaining, the client's application systems.

For this study INPUT has segmented the applications development and maintenance portion of the second submode and included it in Applications Project Services. See the segments market 4B in Exhibit II-1

- The remainder (and majority) of the applications systems operations submode (segment 4B) has been combined with platform systems operations (segment 4A) to provide the size of the OSS line-of-business.
- For this study INPUT has segmented that portion of the consulting submode of the professional services delivery mode directed related to hardware installation, data center design and modification and related services typically provided by the professional staff of the equipment services organization to its clients. This portion has been included in the OSS line-of-business. See the segment market 4D in Exhibit II-1.
- · Systems Integration projects often include OSS type services which are included in the other services component of the Systems Integration delivery mode. This component has been included in the OSS market size. See segment marked 4C in Exhibit II-1.
- In 1991 INPUT included network operations expenditures only if part of a broader Systems Operations agreement. No effort has been made to separate the network operations portion of the Systems Operations delivery mode to include it in Network Integration Services for this study. (see Section G).

YWWMF



Applications Project Services (APS)

Digital defines APS as: design, develop, build and test custom application software and hardware, from scratch or as a modification; provide complementary pull-through systems and products.

APS is a projects and solutions business intended to provide full project services and where appropriate delivery of hardware and software as part of the service including turnkey systems.

INPUT's primary corresponding segments are the software development submode of Professional Services. In addition INPUT includes APS type services within the submodes/components of Turnkey Systems and Systems Integration which have been allocated to APS.

- INPUT's software development submode includes both project based services and skills based services. For this study INPUT has split project services (segment 5A) from other software development services (segment 7B included in DCS).
- Turnkey Systems includes a professional services component that deals with customization and application installation support that has been included within APS in the translation. See segment marked 5B in Exhibit II-1.
- Systems Integration includes a professional services component which primarily corresponds to APS line-of business service. Other than that portion allocated to Digital Consulting Services (see Section H) this component have been included within APS. See segment marked 5C on Exhibit II-1.
- Segment 5D is the application management (and maintenance) services provided as party of an applications systems operations contract. This segment has been included in APS for this study.



The only other noted difference in classification of APS services and systems development is for network development. Digital includes this in NIS. Since no market sizing is being prepared for NIS in this study no attempt was made to size this relatively small segment of software development. (See section G).

G

Network Integration Services (NIS)

Digital defines NIS as: provide multi-vendor network integration and transport integration solutions via planning, design, implementation and management services. Also provide network operation services for wide area and telecommunications networks.

INPUT does not segment the network consulting services within its forecasts and only includes network operation services when they are provided as part of a systems operations (OSS) service agreement.

For this study no effort has been made to size the NIS market according to the Digital Services line-of-business definition.

For 1992 INPUT has added a network operations submode to the Systems Operations delivery mode. This new submode will provide the basis for INPUT to provide Digital a NIS market size in future studies. See segment marked 6A in Exhibit II-1.

H

Digital Consulting Services (DCS)

Digital defines DCS as: provide knowledge transfer consisting of expert advice, analysis, recommendations, process support and facilitation to aid customers with their business, information systems, applications and use of technology.

- Digital Consulting Services includes three categories: enterprise engineering, emerging technologies and information systems management.
- · DCS also includes technical skills based consulting services.



INPUT's consulting and a major portion of the software development submodes within the Professional Services delivery mode corresponds to DCS and provides the primary basis for the translation in this study.

- For this study INPUT has included all of the consulting submode (segment 7A) except that portion allocated to OSS (segment 4D) as described in section E.
- That portion of software development not included in APS has been included in DCS (segment 7B). It includes services not provided as part of an applications systems project.

A portion of the professional services component of the Systems Integration delivery mode is characterized by DCS services (segment 7C) and has been included in the marketing sizing for DCS. INPUT has sized the consulting portion of the systems integration professional services component in its U.S. market analysis and has used that work as the basis for the allocation of this component between DCS and APS.

Project Management - Digital includes project management within APS. INPUT generally classifies project management where it is identifiable on a separate basis within consulting. No effort has been made to adjust market sizes for this difference as it is not felt to have significant impact on relative market sizes.

Customer Training (CT)

Digital defines CT as: provides a portfolio of courseware products and customized services worldwide to meet the additional requirements of customers insuring the successful implementation of Digital solutions. CT includes instructor led services, packaged products (video, text and computer based) and customized training solutions.

INPUT has a directly corresponding submode in the education and training submode of the Professional Services delivery mode. This submode also includes video based training products and has been used to size the CT line-of-business market. See segment marked 8A in Exhibit II-1.

In addition a modest portion of the professional services component of the Systems Integration Delivery mode is education and training services. Where possible this has been included in the CT market size



although it has minimal impact on the overall market size. See segment marked 8B in Exhibit II-1.

INPUT includes a number of cross-industry market sectors within its market structure that include processing services, turnkey systems and applications software products. One of them is Education and Training.

- Education and Training cross -industry sector consists of education and training for information systems professionals delivered as a software product, turnkey system or through processing services; as well as, computer-based training tools for use in the training of any employee.
- For this study the turnkey systems software products (see segment marked 8C) and professional services (see segment marked 8D) submodes as well as the applications software products (see segment 8E) of the Education and Training cross-industry sector have been included in CT.

J

Non-Applicable INPUT Market Segments

Processing Services (see segment marked 9A) - processing services as offered by traditional service bureaus is not included in the Digital Services lines-of-business.

Turnkey Systems and Systems Integration equipment component (see segment marked 10A and 10B). Equipment is not included in the Digital Services lines-of-business.

Applications Software Products - the new products market (as compared to software maintenance and support) revenues are not included in Digital Services lines-of-business and have been excluded except for Education and Training products. See segments market 2A through 2J in Exhibit II-1.



Network Services - INPUT's Network Services delivery mode includes the network applications and electronic information services submodes. Neither are included in Digital Sciences lines-of-business. See segments 11A and 11B in Exhibit II-1.



	• •				es Lines-of-B Applications			Customer		Not	
	Product	Product	Services	Support	Project	Integration	Consulting	Training	Ap	plicat	ole
INPUT DELIVERY MODES	Services	Services		Services	Services	Services	Services	•	ii .		
	(HPS)	(SPS)	(DTS)	(0\$\$)	(APS)	(NIS)	(DCS)	(CT)	Hdw	Soft	Serv
=======================================		=======	=======	========	=========		=========	========	=====	====:	=====
Processing Services	11								11		9A
	11								11		
Turnkey Systems	П										
- Equipment	11								10A		
- Software Products	II								Ï		
- Systems Soft Prod	ii .	2A						8C	ii –	2A	
- Appl Soft Prod	ii	2B						8C	ΪΪ	2B	
	ii				5B			8D	ii		
	11								ii		
Applications Soft Prod	ii								ii		
- Mai nfra me		20						8E	ii	2C	
- Minicomputer	ii	2D						8E	ii	2D	
- Workstations/PC	ii Ii	2E						8E	ii	2E	
	ii Ii								ii		
Systems Operations	ii Ii								ii		
- Platform Sys Oprns	ii			4A							
- Appl Sys Oprns	ii			4B	5D				11		
- Desktop Services			3A*	40	30				11		
- Network Management			37			6A*			11		
Network Harlagement						07			11		
Systems Integration											
- Equipment											
- Software Products									::		
		2F							11	2F	
		2G							11	2G	
		20			5c		7c	8B	11	20	
- Other				4C	50		, c	OB	11		
Other				40					11		
Professional Services	11								11		
- Consulting	11			4D			7A		11		
- Software Development				40	5A		7 A 7B		11		
- Education & Training					JA		7 B	8A	11		
Education & Haining								OA	11		
Network Services									11		
- Electronic Info Svcs	11								11		144
	11								11		11A
- Network Applications									11		11B
Systems Soft Dead	11								11		
Systems Soft Prod - Mainframe	11	211							11	211	
	11	2H							11	2H	
Minicomputer	11	21							П	21	
- Workstations/PC	11	2J							11	2J	
Fourinment C											
Equipment Services	1A								11		
	П								П		
=================================	========			=========					=====	=====	=====

^{* -} Future submodes within INPUT 1992 Definitions.

III Market Forecast Translation

A

Introduction

This document describes the factors and assumptions used in the translation of the INPUT submodes to Digital Services Lines-of-Business. Some of the forecast distribution uses market segments not included in normal INPUT forecasts and additional allocation factors have been developed as required for this study and documented below.

The market forecast used for this study is INPUT's Worldwide Information Services Forecast, 1991-1992 published in April 1992. Digital Equipment Corporation is a subscriber to this study and has access to the full publication through is Market Research Center and Bruce Dishman, Manager of Strategic Planning for Digital Services and the client for this study.

- The information services market forecasts translated are the following:
 - United States
 - Western Europe
 - Japan
 - Rest of the World
 - Worldwide
- The forecast for 1992 and 1996 were translated for each of these markets.

The explanations that follow provide the assumptions used by country/area to translate the various market segments into Digital Services Lines-of-Business. Explanations are only provided where some additional segmentation beyond INPUT's standard market definitions was required.



B

United States

1. Turnkey Systems

Systems and Applications Software Products -

- A portion (17%) of these submodes based on the average for the full software products delivery modes was allocated to SPS.
- A portion of the new products segment was allocated to CT based on the US market forecast for the Education and training cross-industry market sector.
- The remainder was assigned to the not applicable category.

Professional Services -

- · A portion was allocated to CT based on the US market forecast for the Education and Training cross-industry market sector.
- · The remainder and majority was assigned to APS.

The same allocation percentages were used for 1992 and 1996.

2. Software Products

Both applications and systems software products forecasts were distributed between Software Product Services (SPS) (support, maintenance and upgrades) and new product sales (not applicable) by platform size (submode). Where estimates could be made the distribution varies for 1992 and 1996.

This allocation is based on software pricing and support research conducted in Europe in 1987 and 1991 and revised of the US market. The US market has been a stronger purchaser of applications software products for a number of years and has a greater share of ongoing support and upgrade expenditures.



EXHIBIT III-1

Software Products - US Allocation by Submode 1992 & 1996

Amocation by Submout		1//0	•	
-	1	992	199	6
	SPS	New	SPS	New
	%	%	%	%
Applications Software				
Products				
Mainframe	20	80	22	78
Minicomputer	17	83	20	80
Workstation/PC	12	88	15	85
Systems Software				
Products				
Mainframe	16	84	18	82
Minicomputer	16	84	18	82
Workstation/PC	13	88	16	85

A small portion of the New has been allocated to CT. That portion is based on the Cross-Industry Sector forecast done as part of the US Industry Services Market Analysis Program.

3. Systems Operations

Thirty percent (30%) of the Applications Systems Operations submode is believed to represent APS type services and was so allocated. The remaining 70% represents data center and network management services and is allocated to OSS along with the Platform Systems Operations submode.

Over the next few years the applications systems operations submode will grow more quickly than the overall systems operations market. In addition the proportion of the applications systems operations agreement that represents APS type services will also grow to approximately 40% by 1996. Decreasing hardware costs and increased comfort with the applications management concept are factors contributing to this growth.

This change is not currently projected in Western Europe and Japan where systems operations is developing at a slower pace.



4. Systems Integration

Applications and Systems Software Products -

- A portion of this submode based on the average for the full software products delivery modes (17%) was allocated to SPS.
- The remainder was assigned to the not applicable category.

Professional Services was allocated as follows:

- 9% in 1992 and 12.5% in 1996 was allocated to DCS based on INPUT's US systems integration forecasts for 1991-1996.
- 5% was allocated to CT based on experience in the US systems integration market.
- The remainder was allocated to APS for each year.

5. Professional Services

- Consulting 15% of the consulting services submode is estimated to represent services tied to data center and customer services consulting requirements. This portion was allocated to OSS. The remainder was allocated to DCS.
- Software development 35% of the software development submode has been allocated to APS and represent project based services. The remainder, 65%, represents skills based services and is assigned to DCS. The portion representing project based services is less than in Europe because of the more rapid acceptance of systems integration type services in the US.

Western Europe

For this study Eastern Europe market estimates were removed form the European market sizes reported in INPUT's Worldwide Information Services Market, 1991-1996.



1. Turnkey Systems

Systems and Applications Software Products -

- A portion (14%) of these submodes based on the average for the full software products delivery modes was allocated to SPS.
- A portion of the new products segment was allocated to CT based on the US market distribution for the Education and training crossindustry market sector.
- The remainder was assigned to the not applicable category.

Professional Services -

- A portion was allocated to CT based on the US market distribution for the Education and Training cross-industry market sector.
- · The remainder and majority was assigned to APS.

The same allocation percentages were used for 1992 and 1996.

2. Software Products

Both applications and systems software products forecasts were distributed between Software Product Services (SPS) (support, maintenance and upgrades) and new product sales (not applicable) by platform size (submode). Where estimates could be made the distribution varies for 1992 and 1996. This allocation is based on software pricing and support research conducted in Europe in 1987 and 1991.

YWWMF

EXHIBIT III-2

Software Products - Europe Allocation by Submode 1992 & 1996

i modulon of submode				
•	1	992	199	6
	SPS	New	SPS	New
	%	%	%	%
Applications Software				
Products				
Mainframe	14	86	18	82
Minicomputer	13	87	17	83
Workstation/PC	11	89	15	85
Systems Software				
Products				
Mainframe	14	86	18	82
Minicomputer	14	86	18	82
Workstation/PC	10	90	15	85
· ·				

A portion of the New was allocated to CT based on the Cross-Industry Sector forecast in the United States.

3. Systems Operations

Thirty percent (30%) of the Applications Systems Operations submode is believed to represent APS type services and was so allocated. The remaining 70% represents data center and network management services and is allocated to OSS along with the Platform Systems Operations submode.

4. Systems Integration

Applications and Systems Software Products -

- · A portion of this submode based on the average for the full software products delivery modes was allocated to SPS.
- · The remainder was assigned to the not applicable category.

Professional Services was allocated as follows:

- 9% in 1992 and 12.5% in 1996 was allocated to DCS based on INPUT's US systems integration forecasts for 1991-1996.
- 5% was allocated to CT based on experience in the US systems integration market.



• The remainder was allocated to APS for each year.

5. Professional Services

- Consulting INPUT's Customer Services Program Europe sizes the European market for consulting services provided equipment services firms as \$0.2B for 1992 and \$1.4B for 1996. These amounts have been included in OSS with the remainder of the consulting services segment assigned to DCS. (See section 6 below).
- Software development Based on estimates of the split between project based services and skills based services for France,
 Germany, Italy and UK 55% of the software development submode was assigned to DCS (skills based services) and 45% to APS (project based services). The factors for skills based services for the major countries are:

EXHIBIT III-3

Software Development Allocation - Europe Skills Based versus Project Based

Country Skills Base	d Project Based — Percent	Percent
France	65%	35%
Germany	35%	65%
Italy	70%	30%
UK	50%	50%

6. Equipment Services

INPUT has forecasted a broad set of environmental and nonenvironmental services within the customer services market that are provided by both information and non-information technology firms.

Only the environmental services provided by IT vendors has been included in the market sizing to maintain consistency with the definitions in Chapter II and the work in the U.S. These amounts, \$0.2B in 1992 and 1.4B in 1996 have been included in OSS as part of the professional services allocation described above.



EXHIBIT III-4

Customer Services Market - Europe Professional Services

Service Category	1992 \$B	1996 \$B
Environmental Services with IT Vendors	0.2	1.4
Non-Environmental Services with IT Vendors	1.8	3.8
Environmental Services with non-IT Vendors	7.8	10.9
Total	9.8	16.1

n

Japan

INPUT has been forecasting the information services expenditures in Japan since 1989. Where inadequate detail was available to make the allocations for this project the US market was used.

1. Turnkey Systems

Systems and Applications Software Products -

- A portion (13%) of these submodes based on the average for the full software products delivery modes was allocated to SPS.
- · A portion of the new products segment was allocated to CT based on the US market forecast for the Education and training cross-industry market sector.
- · The remainder was assigned to the not applicable category.

Professional Services -

- A portion was allocated to CT based on the US market forecast for the Education and Training cross-industry market sector.
- · The remainder and majority was assigned to APS.

The same allocation percentages were used for 1992 and 1996.

2. Software Products

Both applications and systems software products forecasts were distributed between Software Product Services (SPS) (support, maintenance and upgrades) and new product sales (not applicable) by platform size (submode). Where estimates could be made the distribution varies for 1992 and 1996.

This allocation is based on software pricing and support research conducted in Europe in 1987 and 1991 and as revised for the US market. The Japanese market for software products has developed more slowly than in Europe and the US. A much higher proportion of proprietary in-house developed software remains in use. This will change more quickly over the next few years.

EXHIBIT III-5

Software Products - Japan Allocation by Submode 1992 & 1996

,		1992	199	6
	SPS %	New %	SPS %	New %
Applications Software Products				
Mainframe	12	88	15	85
Minicomputer	12	88	15	. 85
Workstation/PC	10	90	15	85
Systems Software Products				
Mainframe	14	86	10	02
			18	82
Minicomputer	14	86	18	82
Workstation/PC	11	89	15	85

A portion of the New was allocated to CT based on the Cross-Industry Sector forecast in the United States.

3. Systems Operations

Thirty percent (30%) of the Applications Systems Operations submode is believed to represent APS type services and was so allocated. The remaining 70% represents data center and network management services and is allocated to OSS along with the Platform Systems Operations submode.

No change has been made for 1996.



4. Systems Integration

Applications and Systems Software Products -

- A portion of this submode based on the average for the full software products delivery modes (13%) was allocated to SPS.
- The remainder was assigned to the not applicable category.

Professional Services was allocated as follows:

- 9% in 1992 and 12.5% in 1996 was allocated to DCS based on INPUT's US systems integration forecasts for 1991-1996.
- 5% was allocated to CT based on experience in the US systems integration market.
- The remainder was allocated to APS for each year.

5. Professional Services

- Consulting 15% of the consulting services submode is estimated to represent services tied to data center and customer services consulting requirements. This portion was allocated to OSS. The remainder was allocated to DCS.
- Software development 50% of the software development submode has been allocated to APS and represent project based services. The remainder, 50%, represents skills based services and is assigned to DCS.

No changes were assumed for 1996.

F

Other Areas

The US, Western Europe and Japan information services markets represent over 90 percent of the total worldwide market. An Other Areas estimate is provided here to permit a cross check with INPUT's worldwide market forecasts and for completeness. No assumptions were made that differ from those used above in developing these market sizes.



The Other Areas estimate was made by subtracting the US, Western Europe and Japan market numbers from the worldwide total.

Other Areas include: Canada, Eastern Europe, Latin America, Asia/Pacific less Japan and Middle East/Africa as defined in INPUT's Worldwide Information Services Market, 1991-1996.

F

Worldwide

The worldwide market sizes for Digital Services Lines-of-Business as defined by this study were created by comparing the total of the US, Western Europe And Japan markets with the INPUT Worldwide Information Services Forecasts for each delivery mode. The resulting rations were used to prorate the submodes according to the relative ratios of the combined totals for the three major areas. The ratios are listed in Exhibit III-6.

EXHIBIT III-6

Proportion of Worldwide Market Represented by Total of US, Western Europe and Japan. By Delivery Mode - 1992 & 1996

Delivery Mode	Proportion Of Wor	ldwide
•	1992	1996
	%	%
Processing Services	94	94
Turnkey Systems	95	94
Applications Software Products	91	90
Systems Operations	94	94
Systems Integration	93	92
Professional Services	94	94
Network Services	95	94
Systems Software Products	93	92
Equipment Services	90	90
Total Market	93	92



Appendix A Market Forecast Spreadsheets

United States - 1992 United States - 1996 Western Europe - 1992 Western Europe - 1996 Japan - 1992 Japan - 1996 Other Areas - 1992 Other Areas - 1996 Worldwide - 1992 Worldwide - 1996

DECUS2.WR1

Digital Services Lines-of-Business INPUT to Digital Market Forecast Translation

United States-1992

	=			2 104:4:4	Ollica States - 1772	2771 - 63	7.5										
	Hardware	Software	!		Operati	ions 4	Operations ApplicationNetwork	tionNe	, twork	Digital	tal.	Customer		+cN	<u> </u>	= =	Total
	Product	Product		Services	Support	יר ד	Project	I	IntegrationConsulting	onCons	ulting			Appli	Applicable	=	INPUT
INPUT DELIVERY MODES	Services	Services	es		Services	w	Services		Services	Services	ices		_	-		=	Forecast
	(KHPS)	(SPS)	_	(018)	(880)	_	(APS)	Ć	(SIN)	(DCS)	~	(CT)	_	HOWL	Soft	Serv	
	% 8\$ % 8\$ % 8\$	\$8	%	\$B %	88	%	%B % % % % % % % % % % % % % % % % % %	%	\$B %	1	%	\$8	%	\$8	\$8	88	88
Total Market		100% 7.34	100%		6.07	100%	100%11.46	100%		12.05	5 100	100% 3.53	100%	9.73	39.74	30.49	139.86
Processing Services	===															19.70	19.70
Turnkey Systems	:=:													. — -		:==	4
- Equipment - Software Products	= =													- —		==	0.0
- Systems Soft Prod	=	0.11	%									0.01	0%	_	0.51	=	0.63
- Appl Soft Prod	=	99.0	%									90°0	5%	_	3.16	=	3.88
- Professional Services	_==						1.97	17%				0.03	~ _			= =	2.00
Applications Soft Prod	: =												_			=	
- Mainframe	=	1.12	15%									0.04	1%		24.4	=	5.63
- Minicomputer	_	1.05	14%									0.03	3%	_	5.15	=	6.23
- Workstations/PC	= :	1.23	17%									0.18	5%		9.02	= :	10.43
Systems Operations	==															==	
- Platform Sys Oprns	_				4.10	45%							_	_		=	4.10
- Appl Sys Oprns	=				3.89	43%	43% 1.67	15%					_	_		=	5,56
- Desktop Services	=			- x									_	_		=	
- Network Management	_ =				,				*							==	
Systems Integration	: =												-	. —		: =	
- Equipment	_												_	3.72		=	3.72
- Software Products	_												_	_		=	
- Systems Soft Prod	=	0.04	7%										_	_	0.19	=	0.23
- Appl Soft Prod	=	0.07	1%										_	_	0.34	=	0.41
- Professional Services	=						3.73	33%		0.39		3% 0.23	28	_		=	4.35
- Other	= :				0.36	*										= :	0.36
	_													_		=	



DECUS2.WR1

Digital Services Lines-of-Business INPUT to Digital Market Forecast Translation United States-1992

			Unit	United States-1992	266						
			Digital S	Services Lines-of-Business	es-of-Busir	less		-		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	-
	Hardware	Software	Desktop	Operations	Application	Operations ApplicationNetwork	Digital	Customer	Not		Total
	Product	Product	Services	Support	Project	Integratio	IntegrationConsulting Training	Training	Applicable	le	I INPUT
INPUT DELIVERY MODES	Services	Services		Services	Services	Services Services	Services		_		Forecast
	(HPS)	(SPS)	(DTS)	(088)	(APS)	(NIS)	(DCS)	(CT)	Hdwr So	Soft Serv	=
	% 88	% 8 \$	% 88 %	% 8\$	% 8B %	% 8\$	% 88 **	% 8 \$			88
Professional Services											=
- Consulting	=			0.72	8%		4.07 34%	~	_		62.4
- Software Development	=				4.09 36%	%	7.59 63%	~	_		11.68
- Education & Training	=							2.95 84%	_		11 2.95
	=								_		=
Network Services	=							_			=
- Electronic Info Svcs	_							_	_	8.53	8.53
- Network Applications	=								_	2.26	11 2.26
•	_ :										_ =
Systems Soft Prod	=							_			=
- Mainframe	=	1.46 20%	%					_	2	7.68	11 9.14
- Minicomputer	=	1.04 14%	%						2	5.48	6.52
- Workstations/PC	=	0.56 8%	%					_	3	3.74	11 4.30
	=							_	_		=
Equipment Services	16.45 100%	%						_	_		11 16.45
	=							_	_		_
	=======================================								H	11 11 11 11 11 11 11 11 11 11 11 11 11	

* - Future submodes within INPUT 1992 Definitions.



DECUS6.WR1

Digital Services Lines-of-Business INPUT to Digital Market Forecast Translation

United States-1996

		=		וחט	United States-1996	S-1996	•			Ξ			=	
NIS) * * * * * * * * * * * * *				Digital	Services Osces	Lines-or-B	usiness			<u> </u>	1 4 5	8 6 6 8 8	<u> </u>	
# # # # # # # # # # # # # # # # # # #		Hardware	Software	Desktop	uperati	ons Appulc	ationNetwork	. Digital		= =	NOT	1	= =	lotal
* * * * * * * * * * * * * * * * * * *	INPUT DELIVERY MODES	Product Services	Product Services	services	Service	S	S	itionconsult s Service	ing irainir s	= =	Appricable	aple	= =	Forecast
 		(HPS)	(SPS)	(DTS)	(088)				(CT)	_	HOME	Soft Se	Serv	
*		% \$B %	\$B\$	% &B\$ %	\$8	% \$B	\$8	% \$B	% \$B	- %	\$B	\$B \$B	_	\$8
0.14 1% 0.92 7% 2.74 14% 1.59 12% 1.82 14% 3.17 24% 6.50 43% 6.79 45% 4.53 23% * 6.07 1%	Total Market	1 22.53 100	%13.37 10	%00	15.17	100%19.60		17.80	17.80 100% 5.67	100%	15.49	63.18 46	. — -	219.51
0.14 1% 0.92 7% 1.59 12% 1.82 14% 3.17 24% 6.50 43% * 6.50 43% * 6.79 45% 4.53 23% * * 6.70 45% 4.53 23% * 1.80 1%	Processing Services	===										56	26.64	26.64
0.92 7% 0.92 7% 0.92 7% 2.74 14% 1.59 12% 1.82 14% 3.17 24% 4.50 43% 6.50 43% 6.79 45% 4.53 23% * 0.07 1% 0.13 1%	Turnkey Systems - Equipment	==:								==:	8.36		==:	8.36
5 0.92	- Software Products - Systems Soft Prod	==:	0.14	% 18					0.02	1 %0		0.71	==:	0.87
		==	٥.٧٤	%)		2.74	%7!		0.09	1%1		4.39	==	2.79
1.59 12% 1.82 14% 3.17 24% 6.50 43% 6.79 45% 4.53 23% 	Applications Soft Prod	==								==			==	
1.82 14% 3.17 24% 6.50 43% 6.50 43% 6.79 45% 4.53 23% 1	- Mainframe	=		12%					0.05	1%		5.62	=	7.26
s 6.50 43%	- Minicomputer - Workstations/PC	==		14% 24%					0.04	1% = 2%		7.30	==	9.16
s 6.50 43% 6.79 45% 4.53 23%		==							•	=			=	
t	Systems Operations - Platform Sys Oprns	==			6.50	72%				==			==	6.50
t	- Appl Sys Oprns - Desktop Services	==		¥	6.79	45% 4.53	23%			==			==	11.32
	- Network Management	:=:					*			= :			==	
Equipment Software Products - Systems Soft Prod 0.07 1% - Appl Soft Prod 0.13 1%	Systems Integration	==								= =			==	
- Systems Soft Prod 0.07 1% - Appl Soft Prod 0.13 1%		==								==	7,13		==	7.13
- Appl Soft Prod	- Systems Soft Prod	:=:	0.07	1%						= :		0.37	=:	77.0
rioressional services 6.69 55%	- Appl Soft Prod - Professional Services	= = :	0.13	%		68.9	35%	1.04	6% 0.42	= = :		0.65	==	0.78 8.35
- Other 0.70 5%	- Other	==			0.70	%				==			==	0.70



DECUS6.WR1

Digital Services Lines-of-Business INPUT to Digital Market Forecast Translation

			Unit	United States-1996	966							
			Digital S	ervices Lin	Services Lines-of-Business	SSe						1
	Hardware	Software	Desktop	Operations	Operations ApplicationNetwork	Network	Digital	Customer	Not		=	Total
	Product	Product	Services	Support	Project	Integration	IntegrationConsulting Training	Training	Applicable	ole	=	INPUT
INPUT DELIVERY MODES	Services	Services		Services	Services	Services	Services	_			For	Forecast
	(HPS)	(SPS)	(DIS)	(SSO)	(APS)	(NIS)	(DCS)	(CT)	Hdwr Sc	Soft Serv	=	
	#B %	\$B %	\$B	\$B %	\$B %	\$B %	\$8	\$B	\$B	\$8 \$8	-	\$B
Professional Services	<u>-</u>	 									— 	
- Consulting	=			1.18 8%	%		6.67 37%	~	_		=	7.85
- Software Development	=				5.44 28%	≫	10.09 57%	~	_		=	15.53
- Education & Training	=							4.52 80%	_		=	4.52
	=								_	-	=	
Network Services	=							_	_		=	
- Electronic Info Svcs	=							_	_	15.62	. 11 29	15.62
- Network Applications	=:								_	77.7		77.7
44	_ = =										= :	
Systems Soft Prod	=								_		_	
- Mainframe	=	2.40 18%	%					_	_	10.95	=	13.35
- Minicomputer	_	1.71 13%	%					_	_	7.79	=	9.50
- Workstations/PC	=	1.42 11%	%					_	_	7.43	=	8.85
	=								_		=	
Equipment Services	22.53 100%	%						_	_		=	22.53
	=								_		=	
										=======================================		

* - Future submodes within INPUT 1992 Definitions.

DECEUR2.WR1

Digital Services Lines-of-Business INPUT to Digital Market Forecast Translation

Western Europe-1992

			S	Western Europe-1992	-1992								
			Digital So	ervices Li	Services Lines-of-Business	ness		4	-	8 8 0 0		=	1 1 1 1
	Hardware	Software	Desktop	Operation	Operations ApplicationNetwork	onNetwork	Digital	Customer	=	Not		=	Total
	Product	Product	Services	Support	Project	Integratio	IntegrationConsulting] Training		Applicable	le	= =	INPUT
INPUT DELIVERY MODES	Services	Services		Services	Services	Services	Services		=			Fore	Forecast
	[(HPS)	(SPS)	(DTS)	(088)	(APS)	(NIS)	(DCS)	(CT)	=	Hdwr Soft	0,	=	
	% 8\$ % 8\$ % 8\$	\$B\$		% 88 %	% \$B %	\$8	% 8\$ % 8\$ %	\$B		88 \$8	8 \$B	$=$ \mid	\$B
Total Market	15.80 100	100% 3.68 10		1.84 10	100%15.69 100%	 	16.13 100	100% 3.26		8.50 24	24.52 19.36	=	105.05
Processing Services	===										10.07		10.07
Turnkey Systems	==											= =	
- Equipment	=									7.02		=	7.02
- Software Products	=								=			=	
- Systems Soft Prod	_		%					0.00	%0	0	0.32	=	0.37
- Appl Soft Prod	=	0.46	13%					90.0	2%	2	2.56	=	3.08
- Professional Services	_ :				3.61 23	23%		0.07	5%			=	3.68
1 + 3 × 3 × 1 × 1 × 1 × 1 × 1	= =												
Applications soft Prod	= :	1	;						= :			= :	
- Mainframe	=		% *7					0.01	1%0	0	. 88	=	1.04
- Minicomputer	=		12%					0.02	1%	2	2.88	=	3.33
- Workstations/PC	_	0.73	20%					0.05	11%2	.5	5.50	=	6.28
	_								=			=	
Systems Operations	=								=			=	
- Platform Sys Oprns	_			1.00 5	24%				=			=	1.00
- Appl Sys Oprns	_			0.56 3	30% 0.24	2%			=			=	0.80
- Desktop Services	=		ŧ						_			=	
- Network Management	==					*			==			==	
Systems Integration	==								==			==	
- Equipment	=								_	1.48		=	1.48
- Software Products	=								=			_	
- Systems Soft Prod	=	0.02							=	0	0.13	=	0.15
- Appl Soft Prod	=	0.01	%0						=	0	0.10	=	0.11
- Professional Services	=				1.81	12%	0.19	1% 0,11	3%				2,11
- Other	=			0.08	%5				=			=	0.08
	_								=			=	
									:		-	:	



DECEUR2.WR1

Digital Services Lines-of-Business INPUT to Digital Market Forecast Translation

Western Europe-1992

		Digital		Services Lines-of-Business	nes-of-Bus	iness		1		-		-	0
	Hardware	Software	Desktop	Operations	. Applicat	Operations ApplicationNetwork	Digital		Customer	_	Not	=	Total
	Product	Product	Services	Support	Project	Integrat	IntegrationConsulting Training	ting T	raining	App	Applicable	=	INPUT
INPUT DELIVERY MODES	Services	Services		Services	Services	Services	Services	es		=		_	Forecast
	(HPS)	(SPS)	(DTS)	(088)	(APS)	(NIS)	(DCS)		(CT)	Hdwr	Soft	Serv	
	% \$B	% 8.8	% 88 %	\$B %	-	1	% !	% ! % !	%B\$	- \$B	\$B	\$8 \$8	\$8
Professional Services	<u> </u>	 	1 1 1 1 1 1 1 1	 	 	 	1 1 1 1 1 1 1 1 1	(=	l .	=	
- Consulting	=			0.20 11%	%		3.67	23%		=		=	3.87
- Software Development	=				10.03	%49	12.27	%92		=		=	22.30
- Education & Training	=								2.94 90%	=		=	2.94
	_									=		=	
Network Services	_									_		=	
- Electronic Info Svcs	=									=		5.55	3.74
- Network Applications	=									=		3.74	1.82
	=									=		=	
Systems Soft Prod	=									_		=	
- Mainframe	=	0.90 24%	š							=	5,53	=	6.43
- Minicomputer	=	0.62 17%	%							_	3.82	=	77.7
- Workstations/PC	_	0.31 8%	~ °							=	2.80	=	3.11
	_									=		=	
Equipment Services	1115.80 100%	%								_		=	15.80
	=									_		_	
									11 11 11 11 11 11 11	11 11 11 11 11 11 11 11 11 11 11 11 11	11 11 11 11 11 11 11 11		11 11 11 11 11 11 11 11 11

* - Future submodes within INPUT 1992 Definitions.

Digital Services Lines-of-Business INPUT to Digital Market Forecast Translation Western Europe-1996

DECEUR6.WR1

				West	Western Europe-1996	oe-1996										
			Digital	S	ervices Lines-of-Business	Lines-o	f-Busir	ness				=	0			
	Hardware	Software	Desktop	top	Operation	ons App	licatio	Operations ApplicationNetwork	Digital		Customer	=	Not		=	Total
	Product	Product	Services	ices	Support		Project	IntegrationConsulting Training	ionConsul	ting Tra	aining	=	Applicable	able	=	INPUT
INPUT DELIVERY MODES	Services	Services			Services		Services	Services	Services			_			=	Forecast
	_	^	9		(SSO)	3		(NIS)	9		_	=	L	٠	Serv	
	% 8	88	% \$ 8		% 8\$ % 8\$	% \$ B	8 %	\$B	% \$B	8\$ 8\$ 8B % 8\$ 8B	\$B	_	\$B	\$B	88	\$B
Total Market	117.10 100% 8.20	% 8.20 10	100%		4.79	100%29.12	12 100%		28.14	100% 5.73	1 25.	100%	13.09	41.11	24.89	166.14
Processing Services	===											==:			13.30	13.30
Turnkey Systems	==											==			= =	
- Equipment	=											_	10,49		=	10.49
- Software Products	=											_			=	
- Systems Soft Prod	=	0.10	%							Ö	0.01	1 %0		0.47	=	0.58
- Appl Soft Prod	=	1.07	13%							o o	0.12	1 1 %2		7.90	=	60°9
- Professional Services	=:					96.9		24%		0	0.14	2%			=:	7.10
Applications Soft Prod	==											==			==	
- Mainframe	=	0.21	3%							0	0.01	1%0		96.0	=	1.18
- Minicomputer	=	0.95	12%							0	0.04	1%		4.57	=	5.56
- Workstations/PC	=	2.11	792							0.	0.11	1 %2		11.85	=	14.07
	=											=			=	
Systems Operations	=														=	
- Platform Sys Oprns	=				2.00	72%									=	2.00
- Appl Sys Oprns	=				1.23	26% 0.53		2%							=	1.76
- Desktop Services	=		*									minumini) openimini			=	
- Network Management	= :							*				companies of			= :	
	= :															
Systems Integration	= :											_ :	,			,
edu pileiro	= :												7.00		= :	7.00
- Software Products	=											_			=	
- Systems Soft Prod	=	90.0	%									=		0.34	=	05.0
- Appl Soft Prod	=	0.04	%0									_		0.20		0.24
- Professional Services	=					3.77		13%	0.57	2% 0.23	.23	187			=	4.57
- Other	_				0.16	3%						=			=	0.16
	: =											=			-	
	=											=			<u>-</u>	



DECEUR6.WR1

Digital Services Lines-of-Business INPUT to Digital Market Forecast Translation

Serv Soft || Applicable HOWL IntegrationConsulting Training Customer \$B (CT) Services Services Digital (DCS) **\$**B Operations ApplicationNetwork (NIS) **\$**B ---Digital Services Lines-of-Business---Support Project Services (APS) **\$**8 Western Europe-1996 Services (088) Services Desktop (DIS) **\$** Software Services Product (SPS) **\$**B Hardware Services Product (SHPS) INPUT DELIVERY MODES

||Forecast

\$B

|| Total || INPUT

Professional Services	==		ò		%			==	7 5 7
- Consulting	=:	2 04.1		5.65	%0Z	= :		= =	C . C
- Software Development	_		17.86 61%		28%	=		=	59.70
- Education & Training	=				5.07	88%		_	2°02
	=					=		=	
Network Services	_					=		=	
- Electronic Info Svcs	=					=	6.	6.25	3.74
- Network Applications	=					=	5.	5.34	1.82
	=					=		=	
Systems Soft Prod	=					=		_	
- Mainframe	1.33 16%					=	90°9	_	7.39
- Minicomputer	1.28 16%					=	5.81	=	60°2
- Workstations/PC	1.05 13%					=	5.95	=	7.00
	=					=		=	
Equipment Services	17.10 100%					=		=	17.10
_		. !!				=		-	

* - Future submodes within INPUT 1992 Definitions.



Digital Services Lines-of-Business INPUT to Digital Market Forecast Translation

DECJP2.WR1

					Japan-1992	1992											
	=			Digital	Services Lines-of-Business	Line	s-of-Bu	sines					=				0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
	Hardware	Software		Desktop	Operat	ions	Operations ApplicationNetwork	tionNe	etwork	Digital	ital	Customer		Not	یا		Total
	Product	Product		Services	Support	ب	Project	ī	ntegrat	ionCon	IntegrationConsulting	Training		Appli	Applicable		INPUT
INPUT DELIVERY MODES	Services	Services			Services		Services		Services		Services	į					Forecast
	(HPS) \$8 %	(SPS) \$B	*	(DIS) \$8 %	(088)	%	(APS) \$B	ک %	(NIS) \$B	(0CS) % \$8	%	(CI)	= =	HGWL \$B	Soft \$B	Serv \$B	88 — —
Total Market 8.62 100% 0.81 100% 3.61 100% 7.28 100%	8.62 10	100% 0.81	100%		3.61	100%		100%	 		7.26 100	100% 1.83	100%	7.26 100% 1.83 100% 2.73 5.51 7.44	5.51	7,44	45.09
Processing Services	=												==:			90.9	80.0
Turnkey Systems	= =																
- Equipment	:=												: =	1.38			1.38
- Software Products	=												=				_
- Systems Soft Prod	=	0.02	2%									00.00	<u> </u> %0		0.21		0.23
- Appl Soft Prod	=	0.19	23%									0.03	1%2		1.21		1.43
- Professional Services							1.18	16%				0.02	1%				1.20
Applications Soft Prod	==												==				
- Mainframe	_	0.11	14%									0.01	1%		0.81		0.93
- Minicomputer		0.08	10%									0.02	1%		09.0		02.0
- Workstations/PC	=:	0.07	%6									0.02	1%		0.61		0.70
	_ :												= :				
Systems Operations						İ							= :				
- Platform Sys Oprns	= :				2.04	27%							=				5.04
- Appl Sys Oprns	<u> </u>				0.95	26%	26% 0.40	2%					_				1.35
- Desktop Services	=			- k									_				_
- Network Management	==								‡¢				= =				
Systems Integration	==																
- Equipment	=												=	1.35			1.35
- Software Products	=																_
- Systems Soft Prod	=	0.01	1%										=		0.04		0.02
- Appl Soft Prod	=	0.05	%9										_		0.27		0.32
- Professional Services	_						1.28	18%		0.25		3% 0.08	%5				1.61
- Other					0.16	%7							=				0.16
	=												=				

DECJP2.WR1

Digital Services Lines-of-Business INPUT to Digital Market Forecast Translation

				- Company					:			
	 Hardware	Hardware Software Desktop		Services Lines-of-Business Operations ApplicationNetwork	nes-of-Busin : Applicatio	rvices Lines-of-Business Operations ApplicationNetwork	Digital	Customer	<u> </u> =	Not	!	 Total
	Product	Product	Services	Support	Project	Integratio	Ē	, Training	App	Applicable		INPUT
INPUT DELIVERY MODES	Services	Services	6	Services	Services	Services		í	= =			Forecast
	II 48 %	(5P5) \$8	(UIS)	(USS)	(APS)	(NIS)	(UCS) #8 %	(CI)	II HOWL	SOTT	Serv	g
	-			#		× 11		 	94	ij	- II	======================================
Professional Services	=								=		_	
	=			0.46 13%	%		2.58 36	36%	=		_	3.04
Software Development	=				4.42 61	61%	4.43 61%	%1	=			8.85
- Education & Training	==							1.65 90%	===			1.65
Network Services	==								==			
- Electronic Info Svcs	=								=		1.09	1.09
- Network Applications	==								==		0.27	0.27
Systems Soft Prod	:=								: =		_	
	=	0.14 17	17%						=	0.88		1.02
- Minicomputer	=	0.09	11%						=	0.52	_	19.0
- Workstations/PC	=	0.05	%9						=	0.36	-	0.41
Equipment Services	 8.62 100%	%										8.62
	_								=			_

* - Future submodes within INPUT 1992 Definitions.



DECJP6.WR1

Digital Services Lines-of-Business INPUT to Digital Market Forecast Translation

				Japan-1996	- 1996											
	=		Digital	Services Lines-of-Business	s Lines	-of-Bus	iness				0 0	-				8 8 0 6 6
	Hardware	Software	Desktop	0perat	tions A	pplicat	Operations ApplicationNetwork	iork	Digital		Customer	COMPANS.	Not		_	Total
	Product	Product	Services	Support		Project		gratio	IntegrationConsulting	ting Tra	Training	_	Applicable	able	=	INPUT
INPUT DELIVERY MODES	Services	Services		Services		Services		Services	Services			_ :			= :	Forecast
	_	_	(DTS)	9		(APS)	3		(DCS)		_		_	ب	Serv	;
	88 % 88 % 88	## ## ## ## ## ## ## ## ## ## ## ## ##	% 88 % *********************************	88 II	%	* \$8 	8# :- *	%	88	\$ %	% ! 88 !		\$8 \$8	- 1	88	88
Total Market		100% 1.73 1	ı		100%15.88	! !	100%		15.12	100% 3.32	1	100%	4.79	i	11.77.11	82.24
Processing Services	===											===			8.77	8.77
Turnkey Systems	= =											==				
- Equipment	:=											=	2.01		=	2.01
- Software Products	=											=			_	
- Systems Soft Prod	=	0.04	2%							0	0.00	11%0		0.29	_	0.33
- Appl Soft Prod	=	0.27	16%							0	0.03	1%		1.75	=	2.05
- Professional Services						2.35	15%			0	70.0	1%			_ :	2.39
Applications Soft Prod	==														==	
- Mainframe	=	0.21	12%							0	0.02	1%		1.21	=	1.44
- Minicomputer	=	0.18	10%							0	0.03	1%		66°0		1,20
- Workstations/PC	===	0.32	18%							0	0.05	1 2%		1.79		2,16
Systems Operations	==															
- Platform Sys Oprns	: =			4.23	58%							-				4.23
- Appl Sys Oprns	: =			1.96	27%	27% 0.84	2%					-				2,80
- Desktop Services	=		*									-			=	
- Network Management	= =						*					=:				
Systems Integration	==															
- Equipment	:=												2.78			2.78
- Software Products	=														=	
- Systems Soft Prod	=	0.01	1%									=		0.07	_	0.08
- Appl Soft Prod	=	0.05	3%									=		0.42	=	0.47
- Professional Services	=					3.24	20%		67.0	3% 0.20	20	%9			=	3.93
- Other	=			0.23	3%							=			=	0.23
	=											=			=	



DECJP6.WR1

Digital Services Lines-of-Business INPUT to Digital Market Forecast Translation

_ = =											0000000000	0 0 0
<u>a</u>	a	Software Desktop		Operations ApplicationNetwork	Applicat	Operations ApplicationNetwork	Digital	Customer	e	Not		Total
INPLIT DELIVERY MODES	Product Services	Product	Services	Support	Project		IntegrationConsulting Training Services Services	ing Traini :	=	Applicable	9	INPUT
	(HPS)	(SPS)	(DIS)	(088)	(APS)			(CT)	==	Hdwr Soft	ft Serv	
	\$B %	\$B %		% 8\$	\$B	% \$B %	\$	\$B	- %	i		\$B
Professional Services								 	=			
- Consulting				0.92	13%		5.18	34%	=			6.10
Software Development					9.45	%09	9.45	63%	=			18.90
Education & Training								2.95	1 %68			1 2.95
=									=			=
Network Services									=			=
- Electronic Info Svcs									=		2.41	1 2.41
- Network Applications									=		0.59	0.59
=									=			=
Systems Soft Prod									=			=
- Mainframe		0.28 16%	%						=	-	1.25	1.53
Minicomputer		0.17 10%	%						=	0	0.75	0.92
- Workstations/PC		0.20 12%	%						=	_	1.14	1.34
=									=			=
Equipment Services 1	112.63 100%								=			12.63
=									=			_

* - Future submodes within INPUT 1992 Definitions.



Digital Services Lines-of-Business
INPUT to Digital Market Forecast Translation

DECOT2.WR1

20.56

16 |

||Forecast

\$B

|| Total || INPUT 0.07

0.77

0.45

0.80 1.07 1.82 0.03

0.52

tt Services Services Services (CT) Hdwr Soft Services (OTS) (OSS) (APS) (NIS) (OCS) (CT) Hdwr Soft Services Services (OTS) (OSS) (APS) (NIS) (OCS) (CT) Hdwr Soft Services (OTS) (OSS) (APS) (OTS) (OT
Services Services Services Hour Soft Services Servi
\$6 \$ \$8 \$ \$8 \$ \$8
0.87 100% 2.14 100% 2.11 0% 0.53 100% 1.29 5.93 3
52% 39% 0.14 77% 50.07 0% 0.06 60.01 12/ 0.04 60.01 12/ 0.04 60.01 12/ 0.09 60.03 55/ 1.58 60.04 60.07 0% 0.03 62/ 0.05
0.00 0% 0.01 2% 0.01 2% 0.01 1% 0.01 1% 0.01 1% 0.01 1% 0.01 1% 0.01 1% 0.02 5% 39% 0.14 7% 0.54 25% 0.07 0% 0.03 6%
0.00 0% 0.01 2% 0.01 2% 0.01 1% 0.01 1% 0.01 1% 0.01 1% 0.01 1% 0.02 5% 0.54 25% 0.07 0% 0.03 6%
0.00 0% 0.36 17% 0.01 2% 0.01 1% 0.01 1% 0.01 1% 0.01 1% 0.01 1% 0.02 5%
0.36 17% 0.01 2% 0.01 1% 0.01 1% 0.01 1% 0.01 1% 0.01 1% 0.03 5% 11 0.52 11 0.52
52% 39% 0.14
52% 39% 0.14 7% 1 0.52 1 0.52 1 0.52
52% 39% 0.14
52% 39% 0.14 7%
52% 39% 0.14 7%
39% 0.14 7%
0.54 25% 0.07 0% 0.03 6%
0.54 25% 0.07 0% 0.03 6%
0.54 25% 0.07 0% 0.03 6%
0.54 25% 0.07 0% 0.03

DECOT2.WR1

Digital Services Lines-of-Business INPUT to Digital Market Forecast Translation

			Othe	Other Areas - 1992	1992							
			o jetinin	orvices Liv				000000000000000000000000000000000000000		000000000000000000000000000000000000000	0 0	6 6 6 6 8
				services Lines-of-Business	res-or-busi	ness	:	6 6 6 8 8 8		e c c c	6 6 6 6	6 6 6 6 8 8
	Hardware	Software	Desktop	Operations	s Applicati	Operations ApplicationNetwork	Digital	Customer	Not	¥	_	Total
	Product	Product	Services	Support	Project	Integratio	IntegrationConsulting Training	y Training	Appli	Applicable	_	INPUT
INPUT DELIVERY MODES	Services	Services		Services	Services	Services	Services		=		_	Forecast
	(HRPS)	(SPS)	(DTS)	(088)	(APS)	(NIS)	(DCS)	(CT)	Hdwr	Soft	Serv	
	% 8\$	\$B	\$B %	% 88 %	- 1	%	\$B	\$8	=	- 1	_ !	\$8
Professional Services	=				11					II .	_	
- Consulting	=			0.08	%6		0.61	%0	=		_	69.0
- Software Development	=				1.09 5	51%	1,43	%0	=		_	2.53
- Education & Training	=							0.44 83%	= 29		Companies	75.0
	=								_		_	_
Network Services	_								=			
- Electronic Info Svcs	=								=		0.88	00.00
- Network Applications	=								_		0.36	00.00
									=		_	
Systems Soft Prod	=								_		_	
- Mainframe	_	0.19 19%	%						=	1.05		1.23
- Minicomputer	=	0.13 13%	%						=	0.73		0.86
- Workstations/PC	=	0.07	%2						_	0.51		0.58
	_								=			
Equipment Services	4.54 100%	%(=		_	75.4
	=								=		_	
			## ## ## ## ## ## ## ##	11 11 11 11 11 11 11 11					=======================================	=======================================		

* - Future submodes within INPUT 1992 Definitions.



Digital Services Lines-of-Business
INPUT to Digital Market Forecast Translation
Other Areas - 1006

DECOT6.WR1

	8 8 8 8 8 8	Total	INPUT	Forecast	8 \$	38.59	3,36		2.89	1.24	_	0.11	0.81	0.73	_	7.39	1.15	1.85	4.39	_	1.74	1 0.77	26.0	_		07 6	20.7	70.	80 0	0.00	1 37	60.0	_
•	8 8	_	_		Serv –	5.43	3,36		_	_	_	_	_	_	_	_			_	_	_	_	_		_					_		_	_
		Ť	Applicable	į	Soft \$B	11.29						0.09	99.0				06.0	1.49	3.67										0	0,00			
		Not	Appli	:	HGWF \$B	2.26				1.24																	00						
:	:	=	= : g		~	=====				_	_	1%0	1%0	1%0	=	_	1%0	1%0	1%0	_		_		_	-						0%	=======================================	
	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Customer	ng Training		(CI) % \$B	0% 1.06						00.00	0.01	0.01			0.01	0.01	0.07												0% 0 07	5	
	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Digital	IntegrationConsulting	Services	(DCS) \$B	4.24																									0 17		
	SS	Network	Integration	Services	(NIS) \$8 %	;=====================================								\%									~ 0								~		
	Busine	ication	ect	ses	%	.======								%0 ;									%0 %								30		
- 1996	Tues-of	Operations ApplicationNetwork			(APS) % \$B	=======================================								0.72								%0	0% 0.36								1, 13	. %0	
Other Areas - 1996	Services Lines-of-Business	Operation	Support	Services	(088) \$B	1.71																0.77	0.61									0.09	
ءَ		Desktop	Services		(DIS) \$8 %	 																											
					*	100%						1%	%9				10%	15%	28%										0%	1 %	-		
		Software	Product	Services	(SPS) \$8	100% 2.31						0.05	0.13				0.23	0.34	0.65										0.01	0.02) •		
:	Digital	Hardware	Product	Services	(HPS) \$8 %	========= 5.81 10		:=	=	=	=	=	=	=	=	=	_	=	=	_	=	=	=	=	=:		= =	= =	= =	==	==	==	=
				INPUT DELIVERY MODES		Total Market 5.81 100% 2.31 100% 1.71 0% 4.47 0% 4.24 0% 1.06 0% 2.26 11.29 5.43	Processing Services		Turnkey Systems	- Equipment	- Software Products	- Systems Soft Prod	- Appl Soft Prod	- Professional Services		Applications Soft Prod	- Mainframe	- Minicomputer	- Workstations/PC		Systems Operations	- Platform Sys Oprns	- Appl Sys Oprns	- Desktop Services	- Network Management	Svetems Integration	- Fauinment	- Software Products	- Systems Soft Prod	- Appl Soft Prod	- Professional Services	- Other	



DECOT6.WR1

Digital Services Lines-of-Business INPUT to Digital Market Forecast Translation Other Areas - 1996

00.00 1.46 5.12 0.00 0.00 0.87 5.21 2.04 5.81 ||Forecast INPUT || Total \$B 1.45 0.62 Serv \$B 1.67 1.33 1.31 Soft || Applicable Not H Hdwr 88 || % <u>|</u>% IntegrationConsulting Iraining Customer (CT) 0.87 \$B %0 %0 Services Digital (DCS) 1.21 2.86 **\$**B Services Operations ApplicationNetwork ------Digital Services Lines-of-Business----(NIS) **\$**B % Services Project (APS) 2.26 \$8 % Support Services (088) 0.24 \$8 Services Desktop (DIS) \$8 13% 11% 16% Software Services Product (SPS) 0.29 0.24 0.37 \$8 1 5.81 100% Hardware Services Product (HPS) - Education & Training - Electronic Info Svcs Software Development - Network Applications Professional Services INPUT DELIVERY MODES - Workstations/PC Equipment Services Systems Soft Prod Network Services - Minicomputer - Mainframe - Consulting

* - Future submodes within INPUT 1992 Definitions.

1.60

1.57



DECWW2.WR1

Digital Services Lines-of-Business INPUT to Digital Market Forecast Translation

-		
TALOI CO DIBILIZACIONI CORRECTO		,001
יים ואכר	o	
ישין השי		A A. 1 1
3		

			Nor	Worldwide - 1992	1992									
			Digital	Services !	Services Lines-of-Business	ıs iness				=			-	
	Hardware	Software	Desktop	Operation	Operations ApplicationNetwork.	itionNetwor	k. Digital		Customer	=	Not		_	Total
	Product	Product	Services	Support	Project		IntegrationConsulting		Training	=	Applicable	able	_	INPUT
INPUT DELIVERY MODES	Services	Services		Services				ices		=			_	Forecast
	(HPS)	(SPS)	(DTS)	(088)	(APS)	(NIS)	(DCS)		(CT)	=	۷	_	Serv	
		8 8	% \$8 %	\$8	\$B	**************************************	% \$B	ļ	% \$8 %	一 ।	\$B	88 \$8 \$8	- \$8	\$B
Total Market	. —	%12.83 10	45.41 100%12.83 100%	15.39	100%36.57	100%	37.55	ı	:	. —	22.25	75.70 6	60.70	310.56
Processing Services	==:									:		M)	38.01	38.01
Turnkey Systems										==				
- Equipment	=									_	15.18		_	15.18
- Software Products	=									=			_	
- Systems Soft Prod	=	0.19	1%						0.01	%0		1.10		1.30
- Appl Soft Prod	=	1.38	11%						0.16	2%		7.30	_	8.84
- Professional Services	=				7.12	19%			0.13	1%			_	7.25
	==									= =				
Applications soft Prod	= :								!	= ;		,	_	
- Mainframe	_		12%						0.07	% =		6.80	_	8.40
- Minicomputer	=		13%					_	0.08	-% 		9.53	_	11.33
- Workstations/PC	=	2.24	17%						0.28	3%[_	16.71	_	19.23
	=									_			_	
Systems Operations	=									=			_	
- Platform Sys Oprns	=			7.59	%65					_			_	7.59
- Appl Sys Oprns	=			5.74	37% 2.45	%				=			_	8.19
- Desktop Services	=		*							=			_	
- Network Management	=:					*				_			_	
	=:									-			_	
Systems Integration	=												_	
- Equipment	=									-	7.07		_	70°2
- Software Products	=									=				
- Systems Soft Prod	=	0.08	1%							=		0.39	_	95.0
- Appl Soft Prod	=	0.14	1%							_		0.77	_	0.91
- Professional Services	=				7.36	20%	06.0		2% 0.45	2%			_	8.71
- Other	=			09.0	%*					=			_	09.0
	=									_			_	
	_									_			_	



DECWW2.WR1

Digital Services Lines-of-Business INPUT to Digital Market Forecast Translation Worldwide - 1992

			Digital S	ervices Lir	Services Lines-of-Business	SS			-	8 8 8	0 0 0	9 8 0 0 6 8
	Hardware	Software	Desktop	Operations	Operations ApplicationNetwork	Network	Digital	Customer	_	Not	_	Total
	Product	Product	Services	Support	Project	Integratio	IntegrationConsulting Training	Training	App	Applicable	_	INPUT
INPUT DELIVERY MODES	Services	Services		Services	Services	Services	Services		=			Forecast
	(HPS)	(SPS)	(DTS)	(088)	(APS)	(NIS)	(DCS)	(CT)	H HOWL	Soft	Serv	_
	% 8 8	% 88 %		\$B %	%	\$B %		\$B	\$B	88	\$ 8	- \$8
Professional Services	=				 							
- Consulting	=			1.46 9	%6		10.93 29%	\0	_		_	12.39
- Software Development	=				19.63 54%		25.72 69%	~ 0	_			1 45.36
- Education & Training	=							7.98 87%	_		_	7.98
	=								_		_	_
Network Services	=								=		_	_
- Electronic Info Svcs	=								=		16.05	13.36
- Network Applications	=								=		6.63	4.35
	=								_		_	_
Systems Soft Prod	=								_			_
- Mainframe	=	2.69 21%	%						_	15.14	***************************************	17.82
- Minicomputer	=	1.88 15%	%						_	10.55	Committee	12.43
- Workstations/PC	=	0.99	8%						_	7.41		8.40
	_								=		-	_
Equipment Services	45.41 100%	%							_			45.41
	=								_		-	_
			:===========			=======================================			-			

* - Future submodes within INPUT 1992 Definitions.

Digital Services Lines-of-Business INPUT to Digital Market Forecast Translation

DECWW6.WR1

			inroi to Digital mainet Worldwi	Worldwide - 1996	st it allstation 996								
		,	pigital	Services L	Services Lines-of-Business	siness			-		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	=	0 0
	Hardware	Software	Desktop	Operation	ns Applicat	Operations ApplicationNetwork	Digital	Customer	=	Not		=	Total
		Product	Services	Support	Project	IntegrationConsulting	onConsult	ing Training		Applicable	ole	=	INPUT
INPUT DELIVERY MODES	ses	Services		Services			Services		=			_	Forecast
	(HPS) \$8 %	(SPS) \$B	(DTS) % \$8 %	(0SS) \$B	(APS) % \$B	(NIS) % \$B %	(DCS) \$B	(CT) % \$8	= =	Hdwr Sc	Soft Serv \$B \$B	==	\$
Total Market	58.07 100%25.61 100%	25.61		======================================	0,89,07	:=====================================	65.30	======================================	100%	35.63 125.24	5.24 88.79	=	512.51
Processing Services	==:								==:		52.07	==:	52.07
Turnkey Systems									==			==	51.35
- Equipment	: =									22.10		_	22.10
- Software Products	=								_			=	
- Systems Soft Prod	_	0.30	1%					0.03	1 %0		1.56	=	1.89
- Appl Soft Prod	=	2.39	%6					0.25	1 %2	-	11.70	=	14.35
- Professional Services	=				12.77	18%		0.24	1%2			=	13.01
									= :			= :	i
Applications sort Prod	= =	,,,	č					6	= =	·	9	= =	71.04
	= :	42.2	% !					۸0°0	%	•	6.09	= :	50.1
- Minicomputer	_ :	5.29	15%					0.12	<u>~</u>	71	14.35	=	17.77
- Workstations/PC	= =	6.25	24%					0.71	 :	35	35.28	= :	45.24
	= =								_			= :	i F
	= :								= :			= :	50.35
- Platform Sys Oprns	=:				%4				=			_	13.50
- Appl Sys Oprns	=			10.59	36% 6.26	%6			_			=	16.85
- Desktop Services	=		*						_			=	
- Network Management	= =					*			= :			= :	
Systems Integration	= =								= =			= =	35.54
- Equipment	: =									13,53			13.53
- Software Products	:=								_			o cum	
- Systems Soft Prod	=	0.15	1%							0	0.84	_	1.00
- Appl Soft Prod	=	0.24	7%						=		1.37	=	1.61
- Professional Services	=				15.03	22%	2.27	3% 0.92	11%9			=	18.22
- Other	=			1.18	%5				=			=	1.18
	=								=			=	

DECWW6.WR1

Digital Services Lines-of-Business INPUT to Digital Market Forecast Translation Worldwide - 1996

	=		Digital S	Services Lines-of-Business	es-of-Busir	ssət				-		0	
	Hardware	Software	Desktop	Operations	Application	Operations ApplicationNetwork	Digital		Customer	_	Not		Total
	Product	Product	Services	Support	Project	IntegrationConsulting Training	onConsult	ing Trai	ning	ii Ap	Applicable	_	INPUT
INPUT DELIVERY MODES	Services	Services		Services	Services	Services	Services	ý		_			Forecast
	(HHPS)	(SPS)	(018)	(880)	(APS)	(NIS)	(DCS)	(CT)	^	Hdwr	r Soft	Serv	_
% 8\$ % 8\$	% 88	% 8\$	\$B %	\$B %	\$B %	% 88 %	8 \$	88 % 88	%	\$B	\$8	88	88
Professional Services	=									=		_	115.19
- Consulting	=			3.74 13%	*		18.79	26%		_		_	22.54
- Software Development	=				35.01 5	51%	44.24	%89		=		_	79.25
- Education & Training	=							13.41	1 85%	=		_	13,41
										_			_
Network Services										=		_	34.65
- Electronic Info Svcs	=									=		25.73	1 24.28
- Network Applications	=			o,						=		10.99	1 10.37
	=									=			_
Systems Soft Prod	=											-	62.18
- Mainframe	=	4.38 17%	%							_	19.93	_	1 24.31
- Minicomputer	=	3.45 13%	%							_	15.66	_	11.61
- Workstations/PC	=	2.91 11%	%							_	15.85		18.76
	=									_		_	_
Equipment Services	58.07 100%	%								=			58.07
	=									_		_	
	=======================================			:======================================	:======================================				 				

* - Future submodes within INPUT 1992 Definitions.





